

SYSTEM AND METHOD FOR ABATING THE SIMULTANEOUS FLOW OF SILANE AND ARSINE

Abstract

5 A system and method for abating a simultaneous flow of silane and arsine contained in an
exhaust gas of DRAM processing chamber (12). The system includes a CVD abatement
apparatus (20) and a resin-type adsorber (22). The CVD abatement apparatus comprises
an enclosure (24) that defines a chamber (26) for receiving the exhaust gas. The
enclosure contains a plurality of removable substrates (32) arranged as a series of baffles
inside the enclosure. As the exhaust gas flows through the CVD abatement apparatus, the
10 silicon within the silane is deposited as a film upon the substrates by chemical vapor
deposition. The arsine continues to flow through the CVD apparatus to the adsorber
where it is adsorbed by the resin contained therein. After the film has reached a particular
thickness, the substrates can be removed from the enclosure, cleaned of the film and
returned to the enclosure for further use.

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